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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,745	06/19/2001	Sreenivas Subramoney	42390P11422	5588

7590

01/20/2004

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EXAMINER

LE, UYEN T

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/885,745

Applicant(s)

SUBRAMONEY ET AL.

Examiner

Uyen T. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 03 October 1931.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment to the specification is acknowledged. Consequently, objection to the specification and drawings is withdrawn.
2. Applicant's amendments to claims 1, 3, 8, 10, 15, 17 are acknowledged. Consequently, rejection to claims 1-21 under U.S.C. 112, second paragraph is withdrawn.
3. Applicant's arguments have been fully considered but they are moot in view of the new grounds of rejection presented in this Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 8, 15 are rejected under 35 U.S.C. 102(a), (e) as being anticipated by Yelland et al (US 6,219,678).

Regarding claim 1, Yelland discloses all the claimed subject matter including accessing a reference array referencing at least one data object having a content stored in a corresponding memory location (see column 4, lines 23-32), determining a new memory location for the contents of each of the at least one data object and copying the contents of the at least one data object directly to the new memory location (see column 4, lines 35-46). Clearly in the process, the new data object contents of each new data object does not get stored to a cache.

Claims 8, 15 correspond respectively to a computer program product and system for the method of claim 1, thus are rejected for the same reasons stated in claim 1 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 9, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yelland et al (US 6,219,678), in view of applicant's admitted prior art (AAPA) at pages 1-3.

Regarding claim 2, although Yelland does not specifically show copying contents of consecutively referenced data objects to consecutive memory locations, AAPA shows copying contents of consecutively referenced data objects to consecutive memory locations (see pages 1-3). Therefore, it would have been obvious to one of ordinary skill

in the art to include the claimed features while implementing the method of Yelland in order to perform systematic memory reclamation.

Claims 9, 16 correspond respectively to a computer program product and system for claim 2, thus are rejected for the same reasons stated in claim 2 above.

6. Claims 3-7, 10-14, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yelland et al (US 6,219,678), in view of applicant's admitted prior art (AAPA) at pages 1-3, further in view of Pentkovski et al (US 6,356,270) of record.

Regarding claim 3, although Yelland and AAPA do not specifically show a write combine operation, it is well known in the art to use such an operation for efficient utilization of buffers for a sequence of non-temporal stores to scattered locations as shown by Pentlovski (see the abstract). Therefore, it would have been obvious to one of ordinary skill in the art to include the claimed feature while implementing the method of Yelland and AAPA in order to utilize buffers efficiently as taught by Pentkovski.

Claim 4 merely reads on the fact that any central processing units has specific capability. Therefore, the amount of data copied has to depend upon the central processing unit parameters as claimed.

Claim 5 is met by the fact that the garbage collection of Yelland is dynamic (see column 4, lines 6-46).

Regarding claim 6, Yelland discloses Java run-time environment (see column 4, lines 61-67).

Regarding claim 7, Yelland teaches that a plurality of garbage collection algorithms is readily available (see column 4, lines 5-22). AAPA further discloses using a moving garbage collection algorithm in a dynamic run-time environment (see pages 1-3). Therefore, it would have been obvious to one of ordinary skill in the art to use a moving garbage collection algorithm and implement the method of claim 6 as the copy phase of a moving garbage collection algorithm since the method of Yelland operates in a dynamic run-time environment.

Claims 10-14 and 17-21 correspond respectively to a computer program product and system for the method of claims 3-7, thus are rejected for the same reasons stated in claims 3-7 above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen T Le whose telephone number is 703-305-4134.

The examiner can normally be reached on M-F 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Uyen Le
Primary Examiner
AU 2171

14 January 2004